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**Ownership Changes
made by
Bakery and Dairy
Products Companies,
1959-64**

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SUMMARY

During 1959-64, bakery processing companies made an average of 22.0 acquisitions of other establishments per year, a sharp increase (48 percent) from the 1952-58 period. This increase is consistent with the introduction of continuous mix processing and associated technology into the baking industry.

While the average of 49.7 acquisitions per year made by dairy processing companies represented a slight decline from the earlier period (7 percent), acquisitions of nondairy firms more than doubled. Large dairy companies made many acquisitions of snack, specialty, and canning and preserving firms. One factor in this trend toward diversification through acquisition was the relative freedom of such acquisition from antitrust citation.

The number of bakery and dairy products companies making acquisitions increased substantially during 1959-64. Most companies continued making acquisitions mainly within their respective industries.

Bakery companies, in contrast to dairy companies, experienced little diversification through their acquisitions. Bakery products companies experienced no backward integration through acquisitions (grain mill, assembly, or farm establishments). Dairy companies experienced some backward integration of this type. Forward integration (acquisition of wholesale and retail establishments) was more substantial but still minor in comparison to horizontal merger activity.

The 12 largest firms in each industry dominated merger activity within their respective industries. Many of the 12 largest companies in both industries made the majority of their acquisitions within their industries. Some companies, particularly the largest dairies, emphasized diversification. Merger activity by the 12 largest firms in each industry was one of the factors in an increase in concentration within each industry.

Smaller firms on the competitive fringe of both industries also participated in making acquisitions. However, larger companies tended to make larger acquisitions. In addition, acquisitions by dairy companies were larger than those by bakery companies.

In the future, Government regulations and court decisions will probably bring increased pressure for acquisitions into diversified fields. The proportion of growth within both industries accounted for by internal means will increase in comparison to former years.

OWNERSHIP CHANGES MADE BY BAKERY AND DAIRY
PRODUCTS COMPANIES, 1959-64

by

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Ownership changes have helped shape the structure of our economy and the laws which govern it. These changes may affect farmers by changing the number and kinds of buyers to whom they sell, conditions and terms of sale, and market costs and margins. They may affect consumers by changing the method of pricing, the location of establishments, and services provided.

Since World War II, the structure and practices of many food markets have been influenced by companies obtaining control of other companies. Trade reports have emphasized growth by such methods of acquisition as purchase of assets, transfer of stock, and contractual arrangements. However, the ownership changes covered by this report are limited to purchases and mergers. Each involves the gaining by one company of effective policy control over at least one ongoing establishment of another company. 1/

Until 1952, reports by both public and trade agencies were sporadic and fragmentary. In order to describe the frequency and character of acquisitions in the food industry as a means of growth, the U. S. Department of Agriculture, in conjunction with the U. S. Bureau of the Census, conducted a survey of ownership changes for 1952-58 (13). 2/

This survey, published as Marketing Research Report 369, covered 8 food industries: Dairy, bakery, vegetable and animal oils, food products wholesalers, farm product

assemblers, grocery stores, food stores other than grocery stores, and canning, preserving, and freezing. 3/

The present report compares data from MRR 369 on the number and character of ownership changes made by bakery and dairy products firms with data for 1959-64. Acquiring companies in both reports include only processors of bakery and dairy products; wholesalers and retailers of these products are excluded.

The 1952-58 study revealed wide differences between bakery and dairy companies as to the number and character of their acquisitions. These differences, as well as the importance of these industries in food processing, have led to simultaneous updating of the bakery and dairy industries. As will be seen, industry differences relating to the number of acquisitions remained during 1959-64, but differences relating to type of acquisitions declined substantially.

To insure comparability in evaluating the current findings, definitions and categories used in this report are the same as those used in the 1952-58 study.

In contrast to the study for 1952-58, which was based on actual surveys, data reported here for 1959-64 are based solely on secondary sources (1-2, 4-11, 14-18, 24). Data from secondary sources tend to be biased downward since many acquisitions made by smaller firms fail to come to the attention of such media (12).

1/ The following are excluded: Dairy and bakery routes, establishments out of business for more than 6 months, receiving stations, special formulas, equipment, machinery, patents, and copyrights.

2/ Underscored numbers in parentheses refer to items in the Literature Cited, p. 11.

3/ The first updating of MRR 369 was ERS 253 (3).

Number of Acquisitions, 1959-64 and 1952-58 ^{4/}

Average annual acquisitions by bakery products companies during 1959-64 increased by 48 percent over the 1952-58 average (table 1). During 1959-64, a total of 132 acquisitions were reported by 72 companies, or an average of 22.0 acquisitions per year. During 1952-58, a total of 104 acquisitions were reported by 31 bakery companies, or an average of 14.9 acquisitions per year.

During 1959-64, a total of 298 acquisitions were reported by 132 dairy companies--an average of 49.7 per year. Between 1952 and 1958, 80 dairy companies reported a total of 376 acquisitions--an average of 53.7 per year. Thus, acquisitions made in 1959-64 declined by 7 percent from the earlier period.

Multiple Acquisitions, 1959-64 and 1952-58

Bakery products companies making 2 or more acquisitions accounted for 61 percent of all acquiring companies during 1952-58, but only 31 percent in 1959-64 (table 2). During 1959-64, 2 bakery products companies accounted for 15 percent of all acquisitions in the industry.

During 1952-58, 56 percent of all the acquiring dairy products companies made 2 or more acquisitions, but during 1959-64 only 30 percent made 2 or more acquisitions.

For 1952-58, 20 dairy products companies made 5 or more acquisitions. However, for 1959-64, only 9 of these companies made 5 or more acquisitions; 2 of the 9 companies made 62 acquisitions, accounting for 21 percent of all acquisitions in the industry.

Type of Acquisition

Horizontal . Horizontal acquisitions, which are purchases or mergers in the same industry at the same level, dominated in both industries during the two periods (table 1). In 1952-58, 55 percent of all acquisitions made by bakery products companies were horizontal. This corresponds to 76 percent in 1959-64. The average number of horizontal acquisitions by bakery products companies increased from 8.1 per year in 1952-58 to 16.8 in 1959-64.

The increased emphasis on horizontal acquisitions during 1959-64 by bakery products companies is consistent with their expansion of continuous mix processing and associated new technology such as freezing bread. The new technology placed a high premium upon reducing unit costs by expanding the volume of sales. Frequently, sales volume in a new market is a primary benefit obtained by acquiring another company.

In 1952-58, 85 percent of all acquisitions by dairy products companies were horizontal. This compares with 68 percent in 1959-64. While the average annual horizontal acquisitions by baking companies more than doubled in the later period, the average number made per year by dairy products companies decreased from 45.7 in 1952-58 to 33.8 in 1959-64. The reason for this decline appears to have been in part legal rather than economic. The FTC has challenged many horizontal acquisitions made by dairy products companies. The effect of such challenges was noted by Dr. A. C. Hoffman, Kraft Food Company, in a recent speech:

Certainly the anti-trust laws have been an important factor toward

^{4/} The Bureau of the Census made a study of acquisitions for 1959-62 (20) which reported 65 acquisitions of manufacturing facilities by bakery companies and 158 acquisitions by dairy companies. In contrast, the present report shows 75 acquisitions of manufacturing facilities by bakery companies and 182 by dairy companies during the period. The difference in the source of data accounts for most of the difference between Census data and data in this report. For example, Census data were based on a sample of firms which included all those with 100 or more employees and a fraction of those with fewer than 100 employees. Census also included some acquisitions by nonbakery and nondairy companies in its totals.

The Federal Trade Commission (FTC), using secondary sources, made a study of dairy acquisitions for 1959-64 (23). The FTC accounted for 704 dairy acquisitions whereas this report accounted for only 298. However, the FTC included acquisitions of milk routes. The present study included only those firms primarily engaged in processing dairy products. The FTC study included processors, companies engaged primarily in wholesaling and retailing dairy products, and a few companies primarily engaged in nondairy activities. The FTC found that the 8 largest dairy companies made 100 acquisitions over this period, while the present report accounted for 105.

encouraging product diversification and the conglomerate-type operations which have come increasingly to characterize big business in recent decades. From the standpoint of the business firm the reason is simple enough. If it is to grow, for which it has the necessary capital, the management skills and the corporate overhead, then it has a greater chance of avoiding citation by the FTC and the Justice Department by going into new product fields than by increasing its share of market in its own line. ²

Vertical. A vertical acquisition is one in the same or a similar industry at a different level. Both the bakery and dairy products industries experienced little change in the average number of vertical acquisitions per year between 1952-58 and 1959-64 (table 1).

All vertical integration by bakery firms was forward (acquisition of wholesale and retail establishments). No backward integration--for example, into grain processing or grain assembling--was found. The forward integration included 8 retail bakery outlets and 4 bakery wholesalers (table 3).

For 1959-64, 74 percent of all vertical dairy integration involved the acquisition of wholesale dairy firms by dairy processors. Only 5 retail dairy stores, 1 dairy assembler, and 2 dairy farms were vertically integrated by dairy processors.

Conglomerate. A conglomerate acquisition is one in a distinctly different industry. It includes nonfood-industry acquisitions, as well as food-industry acquisitions not classified as horizontal or vertical. While dairy products companies sharply increased conglomerate integration, bakery products companies cut back such activity (table 1).

Dairy products companies increased their average number from 4.3 per year in 1952-58 to 10.6 per year in 1959-64. Bakery products companies decreased their conglomerate acquisitions from 4.3 to 3.2 per year. In

both instances, conglomerate acquisitions were mostly within food industries.

Candy, snack, and specialty firms were the most common types of conglomerate acquisition reported by both industries (table 3). Dairy products companies acquired 24 and bakery products companies 11 such firms. In addition, dairy products companies acquired 2 bakery products firms, but no bakery products companies acquired any dairy products firms.

Dairy companies made 17 nonfood conglomerate acquisitions, and bakery products companies only 1. Acquisitions made by dairy companies were broadly dispersed, including manufacturing firms specializing in 9 different products, a hotel, a farm-supply store, a cosmetic distributor, a bottled water supply company, and 2 storage companies. The 1 acquisition by a bakery company was an advertising firm.

Size of the Acquiring Bakery and Dairy Products Companies, 1959-64

From previous studies--it might be inferred that merger affects only the structure of the industry as measured by increased concentration among the top 4, top 8, and top 20 firms. Merger, however, also changed the 'competitive fringe' of the dairy industry by making the small firms larger, more efficient, and more able to compete (8).

The employment size of acquiring firms supports the proposition that small and medium-size firms achieved greater capacity for efficiency and competition during 1959-64. Where the number of employees in acquiring bakery firms was known, 34 percent had fewer than 500 employees (table 4). Twenty-nine percent of the acquiring dairy firms had fewer than 500 employees. ⁶

Data on asset size show that larger firms made larger acquisitions. Over 83 percent of all firms whose assets were known, ⁷ and which were acquired by bakery companies with as-

⁵/ A. C. Hoffman, Kraft Food Company, "The Law and the Market from the Business Standpoint," a speech before the North Central Regional Committee Seminar, March 3, 1966. (Mention of private enterprises in this report does not constitute endorsement of such firms or discrimination against others.)

⁶/ The number of employees of the acquiring firms was available for 90 percent of all acquisitions made by bakery firms and 72 percent of those made by dairies. Where data were not available, the majority in both industries probably had fewer than 500 employees.

⁷/ Assets of the acquired companies were available for 64 percent of all acquisitions made by bakery companies and 67 percent made by dairy firms.

Table 1.--Number and type of acquisitions by dairy and bakery companies, averages 1952-58 and 1959-64, and annual 1959-64

Year	Dairy companies									
	Bakery companies					Dairy companies				
	Type of acquisition Δ					Type of acquisition Δ				
	Total acquisitions	Horizontal	Vertical	Conglomerate		Total acquisitions	Horizontal	Vertical	Conglomerate	
	NUMBER	NUMBER	NUMBER	NUMBER	NUMBER	NUMBER	NUMBER	NUMBER	NUMBER	NUMBER
Average:										
1952-58 •	14.9	8.1	2.4	(4.3)		53.7	45.7	3.7	(4.3)	
1959-64 ★	22.0	16.8	2.0	3.0	0.2	49.7	33.8	5.2	7.8	2.8
1959.....	27	21	1	4	1	55	43	6	6	0
1960.....	26	21	3	2	0	48	36	3	5	4
1961.....	19	13	3	3	0	56	38	6	10	2
1962.....	12	10	0	2	0	48	31	6	11	0
1963.....	25	17	4	4	0	32	19	3	7	3
1964.....	23	19	1	3	0	59	36	7	8	8
Total.....	132	101	12	18	1	298	203	31	47	17
Percentage distribution										
	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT
1952-58 •...	100	55	16	(29)		100	85	7	(8)	
1959-64 ★...	100	76	9	14	1	100	68	10	16	6

Δ See text pp. 4 & 5 for definition of horizontal, vertical, and conglomerate acquisitions.

• Estimates based on data obtained in a survey by Nelson and Paul (13, table 9, p. 20).

★ Nelson and Paul did not divide conglomerate acquisitions into food and nonfood.

★ Based on (1-2, 4-11, 14-18, 24).

Table 2.--Number of bakery and dairy acquiring companies, total and by number of acquisitions, 1952-58 and 1959-64

Acquisitions per company	Acquiring companies			
	Bakery		Dairy	
	1952-58 Δ	1959-64 $\bullet$	1952-58 Δ	1959-64 $\bullet$
	<u>NUMBER</u>	<u>NUMBER</u>	<u>NUMBER</u>	<u>NUMBER</u>
1.....	12	50	35	93
2-4.....	12	16	25	30
5-9.....	5	4	13	5
10-19.....	2	2	3	2
20-49.....	0	0	3	2
50-79.....	0	0	1	0
Total acquiring companies.....	31	72	80	132

Δ Nelson and Paul (13).
 $\bullet$ (1-2, 4-11, 14-18, 24.)

Table 3.--Number of acquisitions by bakery and dairy companies in specified industries, 1959-64

Industry of acquisition Δ	Acquisitions by--	
	Bakery companies	Dairy companies
	<u>NUMBER</u>	<u>NUMBER</u>
Meat $\bullet$	3	1
Dairy:		
Farming.....	0	2
Assembling.....	0	1
Processing.....	0	203
Wholesaling.....	0	23 $\star$
Retailing.....	0	5
Total.....	0	234
Canning and preserving	3	17
Grain.....	1	2
Bakery:		
Processing.....	101	2
Wholesaling.....	4	0
Retailing.....	8	0
Total.....	113	2
Candy.....	4	7
Snack items.....	6 $\blacksquare$	13 $\square$
Specialty items.....	1 $\blacklozenge$	4 $\blacklozenge$
Beverage and flavoring	0	1
Nonfood firms.....	1	17
Grand total.....	132	298

Δ Includes farming, assembling, processing, wholesaling, and retailing enterprises.
 $\bullet$ Includes poultry.
 $\star$ Includes purchases of processing plants to be converted into receiving stations.
 $\blacksquare$ 4 potato chips companies, 1 corn chips company, 1 nut company.
 $\square$ 8 potato chips companies, 1 corn chips company, 4 nut companies.
 $\blacklozenge$ Coffee and tea company.
 $\blacklozenge$ 1 mayonnaise and margarine company, 2 Mexican can food companies, 1 sugar cone company.

Table 4.--Number of acquisitions made by bakery and dairy companies, by employment size of acquiring companies, 1952-58 and 1959-64

Employment size of acquiring companies	Acquisitions made by--			
	Bakery companies		Dairy companies	
	1952-58 Δ	1959-64 $\bullet$	1952-58 Δ	1959-64 $\bullet$
Number of employees:	<u>NUMBER</u>	<u>NUMBER</u>	<u>NUMBER</u>	<u>NUMBER</u>
0-99.....	3	11	33	14
100-499	17	30	93	47
500-999	22	12	47	20
1,000-4,999	18	20	62	28
5,000 and over ...	44	46	142	104
Not available.....	0	13	0	85
Total acquisitions	104	132	377	298

Δ Nelson, and Paul (13, table 9, p. 20).

$\bullet$ (1-2, 4-11, 14-18, 24.)

sets over \$100 million, had assets of \$500,000 or more (table 5). Fifty percent of the acquisitions made by bakery companies with assets between \$10 million and \$100 million had assets of \$500,000 or more. Thirty percent of the acquisitions by companies with assets of \$500,000 to \$10 million had assets of \$500,000 or more.

Almost 88 percent of the acquisitions made by dairy companies with assets of over \$100 million had assets of \$500,000 or more (table 5). ^{8/} Seventy-two percent of all firms acquired by dairy companies with assets between \$10 million and \$100 million had assets of \$500,000 or more, and 36 percent of acquisitions made by companies with assets between \$500,000 and \$10 million had assets of \$500,000 or more.

A majority (60 percent) of firms acquired by bakery products companies had assets between \$50,000 and \$500,000. Dairy acquisitions were larger; most (51 percent) had assets between \$500,000 and \$10 million.

Acquisitions by the 12 Largest Bakery and Dairy Products Companies

Between 1959 and 1964, the 12 largest bakery products companies made almost 36 percent

^{8/} Assets of 65 percent of the acquired companies were known.

^{9/} Largest companies ranked by sales size in 1964. In 1958, the 12 largest bakery and like-wise dairy companies made 40 percent of the sales of all companies primarily engaged in processing bakery and dairy products, respectively (19). By 1964, the 12 leading bakery and dairy companies had increased their share of total sales to 45 and 44 percent, respectively. The share attributable to internal growth and to mergers is unknown. See footnote to table 6 for method of estimating sales of all companies for 1964.

of all acquisitions reported for that industry (table 6). ^{9/} Variations were great among the 12 largest companies, not only in the number of firms they acquired, but also in their type of acquisition. Three of the 12 strengthened their positions in the baking industry by horizontal acquisitions. Two used acquisitions primarily to diversify their operations. The 2 with the most acquisitions made both horizontal and conglomerate acquisitions. The remaining 5 of the 12 made too few acquisitions to fit any particular pattern. The 5 companies that made 5 or more acquisitions increased their combined sales by 50 percent during 1959-64. The companies that made 2 or fewer acquisitions increased their combined sales 4 percent for the same period.

The 12 largest dairy products companies accounted for an even greater proportion of all acquisitions reported for their industry --43 percent. This includes 29 percent of all horizontal, 32 percent of all vertical, 96 percent of food conglomerate, and 82 percent of nonfood conglomerate acquisitions. Each of the 12 largest dairy products companies made acquisitions, while some of the bakery products companies made none. The

Table 5.--Number of acquisitions made by bakery and dairy companies, by asset size of acquisitions, 1959-64

Asset size of acquiring company (\$1,000)	Total acquisitions	Assets of acquisition (\$1,000)				
		Under 50	50-499	500-9,999	10,000-99,999	Not available
	<u>NUMBER</u>	<u>NUMBER</u>	<u>NUMBER</u>	<u>NUMBER</u>	<u>NUMBER</u>	<u>NUMBER</u>
Bakery companies:						
Under 50.....	3	1	0	0	0	2
50-499.....	11	1	9	0	0	1
500-9,999.....	54	4	24	12	0	14
10,000-99,999.....	35	0	11	10	1	13
100,000 and over....	13	0	1	5	0	7
Not available.....	16	0	5	0	0	11
Total.....	132	6	50	27	1	48
Dairy companies:						
Under 50.....	5	4	0	0	0	1
50-499.....	30	11	11	0	0	8
500-9,999.....	108	11	33	25	0	39
10,000-99,999.....	43	2	6	19	2	14
100,000 and over....	91	1	7	55	2	26
Not available.....	21	5	3	0	0	13
Total.....	298	34	60	99	4	101

7 companies making 5 or more acquisitions increased their sales by 39 percent during 1959-64, while 5 companies making fewer than 5 acquisitions increased theirs by 26 percent.

Acquisitions of 7 of the 12 companies were mainly within the dairy industry. Four other companies among the largest 12 made more conglomerate acquisitions than vertical and horizontal combined.

Estimates projecting a range of probable industry sales for 1964 were made (1) by assuming that all companies other than the largest 12 had no change in absolute sales during 1959-64, and (2) by assuming that sales had increased by the mean percentage experienced by the 12 largest companies. ^{10/}

In both baking and dairy products industries, for both assumptions, the 12 largest companies made fewer horizontal and vertical, and more conglomerate acquisitions per sales dollar than the other companies.

Future Structural Changes

Patterns of growth experienced during recent years can assist in forecasting future changes. For 1952-64, a one-sample chi-square test, significant at the 1-percent level, ruled out the possibility of random variation from year to year in the number of ownership changes by bakery or dairy companies. However, examination of the raw data revealed neither a discernible trend nor a cyclical pattern for acquisitions by dairy companies. Although acquisitions by bakery companies showed some rise over time, yearly fluctuations were great; here also a definite trend could not be established without data for more years.

Although the number of acquisitions by year revealed no pattern for 1952-64, the type of acquisition by both bakery and dairy companies changed. Comparisons showed that bakery companies made more, and dairy companies fewer, horizontal acquisitions in

^{10/} The estimate in table 6 falls within this range.

Table 6.--Number and type of acquisitions by 12 largest companies in bakery and dairy industries, 1959-64 Δ

Rank of company	Total	Type of acquisition				Increase in sales, 1959-64	Total sales, 1964
		Horizontal	Vertical	Conglomerate			
				Food	Nonfood		
	NO.	NO.	NO.	NO.	NO.	PCT.	MIL. DOL.
Bakery companies:							
Leading 4.....	24	16	1	7	0	50.1	1,585.1
Next 4.....	20	14	0	5	1	20.6	685.5
Next 4.....	4	2	1	1	0	6.9	232.3
Total.....	48	32	2	13	1	35.9	2,502.9
All companies.....	132	101	12	18	1	22.2 •	5,619.4 •
Dairy companies:							
Leading 4.....	73	28	7	27	11	38.7	4,296.8
Next 4.....	32	19	2	8	3	28.0	1,128.1
Next 4.....	22	11	1	10	0	1.5	334.1
Total.....	127	58	10	45	14	33.7	5,759.0
All companies.....	298	203	31	47	17	21.0 •	13,165.2 •

Δ Ranked by sales in 1964.

• Sales for all companies in the industries are available from Bureau of the Census (19) for 1958, but not for 1959-64. Estimate of total sales was obtained by assuming that the average annual rate of growth of all companies, excluding the 12 leading, was the same as the average annual rate of growth of the value of shipments of all establishments primarily engaged in processing baking and dairy products, respectively (Bureau of Census, 21).

1959-64 than in 1952-58. Chi-square tests for each industry comparing the two periods showed this difference to be statistically significant at the 1-percent level.

The rise in horizontal acquisitions made by bakery companies is consistent with the development and implementation of continuous mix processing. Any horizontal acquisition will, of course, contribute to a concentration of ownership of the industry's establishments in the absence of offsetting growth in the rest of the industry. For dairy and bakery companies during 1959-64, there was no such offsetting growth. For example, table 7 shows that most of the net growth in the

number of bakery plants owned by the 12 largest bakery products companies between 1959 and 1964 was caused by acquisition rather than by internal growth through construction of new plants.

In 1958, the 12 largest bakery products companies owned 15.6 percent of all bakery plants in the industry with 20 or more employees. By 1963, their share had increased to 17.6 percent. This increase resulted mostly from acquisitions of plants from other firms.

Table 7.--Plants owned by the 12 leading bakery companies, 1958 and 1964, and acquired, built, and closed during 1959-64 Δ

Type of plant	Owned 1958	Acquired and retained 1959-64	Built 1959-64 $\bullet$	Closed 1959-64	Owned 1964
	NUMBER	NUMBER	NUMBER	NUMBER	NUMBER
Baking and snack $\star$	367	53	9	50	379
Grain mill.....	7	0	0	0	7
Other food.....	5	9	0	1	13
Total.....	379	62	9	51	399

Δ 12 largest companies measured by sales in 1964.

$\bullet$ Moody's and company reports may not include all small plants built.

$\star$ Includes cereals and dog food biscuits.

Source: Moody (10) and company annual reports.

Comparable data are not available for dairy companies. However, the large number of horizontal acquisitions as well as the results of many of the antitrust actions initiated against acquisitions by some of the 12 largest dairy companies suggest that the dairy industry also experienced increased concentration because of horizontal acquisitions. ^{11/}

Of equal analytical interest is the pronounced increase in the number of conglomerate acquisitions. One possible and important contribution to conglomerate acquisition appears to be the relatively greater historical freedom from antitrust action accorded conglomerate, as opposed to horizontal, acquisitions. Also, the larger firms appeared to want to expand into product lines that could be distributed under their existing marketing arrangements. Our data, in terms of continuing numbers of acquisitions, suggest that many firms have had satisfactory experience with their conglomerate acquisition of snack food operations.

During the 1952-58 period, the dairy industry made a greater proportion of horizontal acquisitions than did baking. During 1959-64, both industries made similar pro-

portions of such acquisitions. Was the industry difference, in these proportions of horizontal acquisitions in both periods, a chance (random) phenomenon, or was it statistically significant? Chi-square tests for two independent samples comparing the two industries within each of the two periods showed statistical significance at the 1-percent level for the first period, and not for the second. ^{12/} This finding suggests that the special characteristics of the 2 industries may have given way to the general characteristics of food processors, and that the 2 industries may in the future follow similar patterns of ownership change.

During 1959-64, firms with assets of \$500,000 or more made the greatest number of acquisitions. These companies generally acquired firms of approximately their own asset size. Likewise, smaller companies acquired firms of their own size.

Future Developments

Institutional constraints probably will lower the number of horizontal acquisitions which the largest 4 dairy companies will make. For these companies prior clearance of any horizontal acquisitions is required

^{11/} Increased concentration by the largest manufacturers, including 4 dairy processors, has been the trend since 1947 (²²). All increase in concentration is not due to acquisition.

^{12/} However, at the 10-percent level of significance, bakery companies made substantially more horizontal acquisitions than dairy companies.

by agreement with the FTC. Such companies should look with increasing favor upon conglomerate acquisitions.

While large baking companies have no corresponding constraint in force, the constraint on dairy companies could indirectly affect their incentive to make horizontal mergers.

The increasing "real demand" abroad for U. S. products, a domestic population with increasing proportions of the very young and the very old, and rising defense expenditures, all contribute to long-run expectations of increasing overall demand. Historically, such an economic climate has always encouraged growth, both by acquisitions and by internal means. Today's economic pressures for growth show no immediate signs of letup. While institutional constraints (like past and pending legislation and court decisions) will influence the character of growth by acquisitions, growth by acquisition will remain prevalent. Probably there will be both increased conglomerate and vertical acquisitions, along with internal growth within industries.

Such a pattern of acquisitions and increased internal growth could mean the disappearance of small, independent, and unaffiliated firms. Most firms will be moderate to large in size in today's terms. They will also be multiestablishments, and in many instances will be more diversified. Among very large firms, classifications as "bakery," "canner," or "packer" may become very difficult and analytically meaningless. Entry into each industry will become costly in terms of capital requirements and both technical and managerial "know-how."

The expansion of multiestablishment companies will increase companywide scheduling of production, and the necessity of quite rigid specifications for products serving as inputs to their own final products. Such companywide scheduling and purchase programs will require supply sources that can consistently provide adequate quantities of products of the desired quality. Such procurement pressures upon growers could encourage the rate of formation of grower organizations to coordinate production activities, sales, and vertical backward integration, through either contract or ownership by processors.

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